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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/650,267	08/27/2003	Sharon K. Brault	H0005153	6589

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EXAMINER

KIM, CHONG HWA

ART UNIT	PAPER NUMBER
3682	

DATE MAILED: 07/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/650,267

Applicant(s)

BRAULT ET AL.

Examiner

Chong H. Kim

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>8/27/03</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 3-8 and 19 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claims 3 and 19 recite the limitation wherein the actuator assembly is configured to disengage the flywheel assembly when the magnetic bearing assemblies are deactivated. Such limitation is not clearly explained in the specification as originally filed. It appears that the magnetic bearing assemblies are activated when the actuator assembly is disengaged from the flywheel rather than deactivated.

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 13 and 14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 13 recites the limitation "the actuator assembly control circuit" in line 3. There is insufficient antecedent basis for this limitation in the claim.

Claim 14 recites the limitation “a latch-type solenoid”. It is indefinite because the addition of the word “type” to an otherwise definite expression extends the scope of the expression so as to render it indefinite. It is not clear what “type” of solenoid was intended to convey.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1, 9, 10-12, 15-18 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Livet et al., U.S. Patent 4,345,485.

Livet et al. shows, in Figs. 1-4, both the apparatus of an energy storage flywheel system and a method of selectively inhibiting rotation of a rotationally mounted flywheel assembly comprising a housing assembly 2; a flywheel assembly 1 rotationally mounted in the housing assembly; one or more actuator assemblies 3-7, 10-13, each actuator assembly configured to selectively engage the flywheel assembly, to thereby inhibit movement thereof, and disengage the flywheel assembly, to thereby allow movement thereof; a shaft 11; a flywheel hub coupled to and surrounding the shaft; wherein each actuator assembly is configured to selectively engage and disengage the flywheel hub; and wherein each actuator assembly, when engaging the flywheel assembly, inhibits both rotational movement and translational movement of the flywheel assembly; one or more magnetic bearing assembly 3-7 adapted to receive an activation

or inactivation command; an actuator assembly control circuit (inherent since the actuator assemblies react based on the electrical signals produced in a space vehicle) that is configured to supply signals to the actuator assembly and the magnetic bearing assembly; a magnetic bearing controller (inherent since the magnetic bearings are electromagnetic bearings).

7. Claims 1, 2, 9, 10, 13, 14, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Perez de la Orden, U.S. Patent 4,533,021.

Perez shows, in Figs. 1-3, both the apparatus of an energy storage flywheel system and a method of selectively inhibiting rotation of a rotationally mounted flywheel assembly comprising a housing assembly, a flywheel assembly 9 rotationally mounted in the housing assembly; one or more actuator assemblies 6, 11, each actuator assembly configured to selectively engage the flywheel assembly, to thereby inhibit movement thereof, and disengage the flywheel assembly, to thereby allow movement thereof; a shaft; a flywheel hub coupled to and surrounding the shaft; wherein each actuator assembly is configured to selectively engage and disengage the flywheel hub; and wherein each actuator assembly, when engaging the flywheel assembly, inhibits both rotational movement and translational movement of the flywheel assembly; an actuator assembly control circuit (see Fig. 3) configured to selectively supply an engage signal and a disengage signals, wherein each actuator assembly is coupled to receive the engage and disengage signals from the control circuit and operable, in response thereto, to engage and disengage the flywheel assembly, respectively; the actuator assembly comprising a solenoid 7 coupled to receive the signals from the control circuit to move in an engage and disengage direction, and a lock mechanism 14, 15 coupled to the solenoid and configured to engage the flywheel assembly when

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the solenoid moves in the engage direction and disengage the flywheel assembly when the solenoid moves in the disengage direction, wherein the solenoid is a latch-type solenoid.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Flywheel with brakes.

Blonski et al., U.S. Patent 6,923,090 B2

Smith, U.S. Patent 5,419,212

Vaillant De Guelis et al, U.S. Patent 4,872,357

Koerner et al., U.S. Patent 4,654,492

Wittler et al., U.S. Patent 4,823,926

Kajitani et al., U.S. Patent 3,589,485

Meier, U.S. Patent 4,172,985

Kubokura, U.S. Patent 3,910,211

Yang, U.S. Patent 6,964,311 B2

Flywheel with electromagnetic bearings.

Gabrys, U.S. Patent 6,630,761 B1

Gabrys, U.S. Patent 6,750,588 B1

McMullen et al., U.S. Patent 6,897,587 B1

Hoshio et al., U.S. Patent 5,628,267

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Flywheel with locking actuator.


Leconte et al., U.S. Patent 6,006,871

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chong H. Kim whose telephone number is (571) 272-7108. The examiner can normally be reached on Monday - Friday; 6:00 - 2:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571) 272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

chk
June 27, 2006


CHONG H. KIM
PRIMARY EXAMINER